

Remarks/Arguments

Applicants wish to thank the Examiner for the careful review of the claims, specification, and drawings.

Claims

Claim 1 is currently amended.

Claims 34-37 and 55-58 have been previously withdrawn.

Claims 2, 4, 12, 15, 18, 22-25, 27, 29, 39, 41-44, 50, and 54 have been previously presented.

Claims 3 and 45 have been canceled.

After entry of this amendment, claims 1-2, 4-33, 38-44, and 46-54 are pending.

It is respectfully submitted that each and every feature recited in the pending claims are fully supported in the specification as filed. No new subject matter has been added.

Rejections under 35 USC § 103

The Office Action argues that claims 1, 2, 4-7, 9-33, 38-39, 44, and 46-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shih et al. (U.S. 20030190870), hereinafter "*Shih*", in view of Han et al. (20030127049), hereinafter "*Han*", and in further view of Crevasse et al. (20020129393), hereinafter "*Crevasse*".

The Office Action argues that claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Shih*, *Han*, and *Crevasse* as applied to claim 2 above, and further in view of Suzuki et al. (US Patent 4,688,918), hereinafter "*Suzuki*".

The Office Action argues that claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shih*, *Han*, and *Crevasse* as applied to claim 2 above, and further in view of Amai et al. (U.S. 7,063,094), hereinafter "*Amai*".

Claims 1, 2, 4-7, 9-33, 38-39, 44, and 46-54:

A rejection under 35 U.S.C. 103(a) requires that the combined references suggest the claimed combination (MPEP 706 and 2141 et seq.). Under the Graham

test, three factors must be evaluated: the scope and content of the prior art; the differences between the prior art and the claimed invention; and the level or ordinary skill in the art (MPEP 706 and 2141 et seq.).

The Office Action argues that claims 1, 2, 4-7, 9-33, 38-39, 44, and 46-54 are rejected under 35 USC §103(a) as being unpatentable over *Shih* in view of *Han*, and in further view of *Crevasse* for various reasons.

Applicants have amended independent claim 1 to clarify the feature as followed:

“...mechanically rubbing a surface of said set of structures with a third solution including a first set of acids for a third period, said third period being about 1 minute, wherein said third solution is configured to be non-reactive with respect to said surface of said set of structures including said yttrium oxide during said mechanical rubbing.”

The support for this feature may be found in the specification in paragraphs [8] and [51].

Han teaches employing yttrium coating to better protect the chamber parts from corrosion. However, applicant can not find the teachings anywhere in *Han*, *Shih* and/or *Crevasse*, taken alone or in combination, the problem that inorganic acids may attack yttria and cause substantial corrosion, as taught in the application. The criticalities of selecting the chemical ingredients and exposure time for cleaning as not to cause corrosion with yttrium coated surface are not obvious by simple experimentation due to the complexities of the surface chemistries of yttrium coating parts in plasma processing.

Therefore, immersion of a ceramic structure in a strong acid, as taught by *Shih*, may be a viable solution for cleaning ceramic structure but may result in **substantial corrosion with yttrium coated parts**. Thus, it is not obvious that one ordinary skilled in the art would attain reasonable success by taking yttrium oxide coated ceramic parts taught by *Han* as the parts to be cleaned by *Shih* as suggested by the Office Action. On the contrary, the combination of the teachings of *Shih* and *Han* as suggested by the Office Action is not logical and may destroy the intended cleaning function by dipping yttrium coated parts to a strong acid.

It is respectfully submitted neither *Shih*, *Han*, and/or *Crevasse*, taken alone or in combination teach the length of time as required by the feature "said third period being about 1 minute" of independent claim 1. Due to the non-obvious problem that inorganic acids may attack yttria and may cause substantial corrosion, the time expose to strong acid is not obvious and simply may be optimized by routine experimentation as argues by the Office Action.

Hence, due to the complexities of the surface chemistries of yttrium coated surfaces in plasma processes, the method(s) for cleaning of yttrium coated parts is not obvious and may simply be combined by the suggested references of *Shih*, *Han*, and/or *Crevasse*, taken alone or in combination. As aforementioned, the combination of *Shih* and *Han* is not logical and would produce an inoperative cleaning method that can cause corrosion to yttrium coated parts. Furthermore, the references of *Shih*, *Han*, and/or *Crevasse*, taken alone or in combination do not teach the length of time as required by the feature of independent claim 1.

For the above reasons and others, it is respectfully submitted that the independent claim 1 is novel, nonobvious, and patentable over the cited art(s), taken alone or in combination. Consequently, Applicants submit that the rejection of independent claim 1 under 35 USC § 103(a) be withdrawn.

Dependent claims 2, 4-7, 9-33, 38-39, 44, and 46-54 depend from independent claim 1 and require additional elements or features not taught or suggested by the cited arts, taken alone or in combination. Since independent claim 1 should now be allowable, Applicants submit that the rejection of dependent claims 2, 4-7, 9-33, 38-39, 44, and 46-54 under 35 USC § 103(a) be withdrawn.

No new subject matter has been added.

Claim 8:

The Office Action argues that claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Shih*, *Han*, and *Crevasse* as applied to claim 2 above, and further in view of *Suzuki* for various reason(s).

Dependent claim 8 depends from dependent claim 2, which depends from independent claim 1, and requires additional elements or features not taught or

suggested by the cited arts, taken alone or in combination. Since independent claim 1 should now be allowable, Applicants submit that the rejection of dependent claim 8 under 35 USC § 103(a) be withdrawn.

No new subject matter has been added.

Claims 40-43:

The Office Action argues that claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shih, Han*, and *Crevasse* as applied to claim 2 above, and further in view of *Amai* for various reason(s).

Dependent claims 40-43 depend from dependent claim 2, which depends from independent claim 1, and require additional elements or features not taught or suggested by the cited arts, taken alone or in combination. Since independent claims 1 should now be allowable, Applicants submit that the rejection of dependent claims 40-43 under 35 USC § 103(a) be withdrawn.

No new subject matter has been added.

CONCLUSION

In view of the discussion herein, Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application the undersigned can be reached at the telephone number set out below.

If any petition is required to facilitate the entry of the present amendment, please consider this communication a petition therefore as well. The Commissioner is authorized to charge any fees beyond the amount enclosed which may be required, or to credit any overpayment, to Deposit Account No. 50-2284 (Order No. LMRX-P023/P1130).

Respectfully submitted,

/Joseph A. Nguyen/

Joseph A. Nguyen
Reg. No. 37,899
408-213-9540